

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
260°C/10 seconds
- ◆ Compliant to RoHS Directive 2011/65/EU
- ◆ Compliant to Halogen-free



### Mechanical data

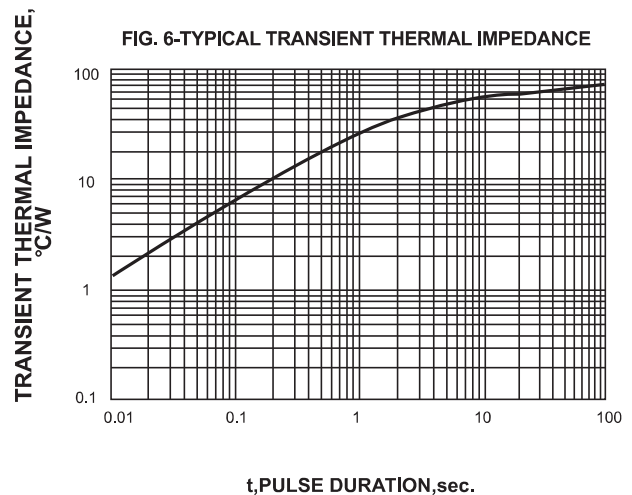
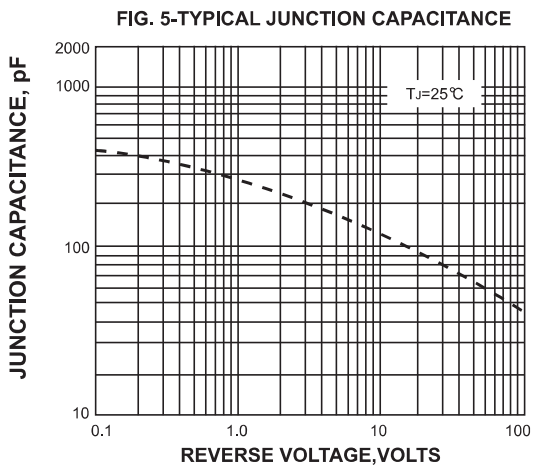
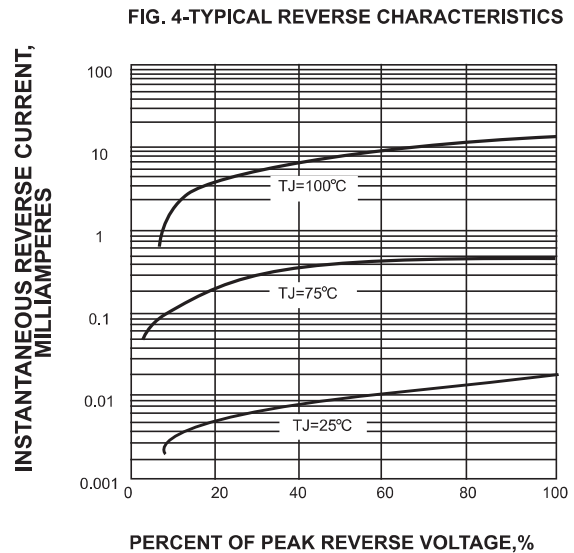
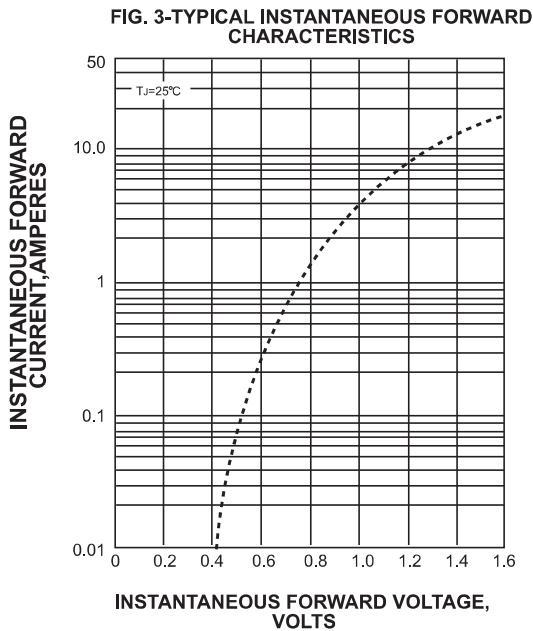
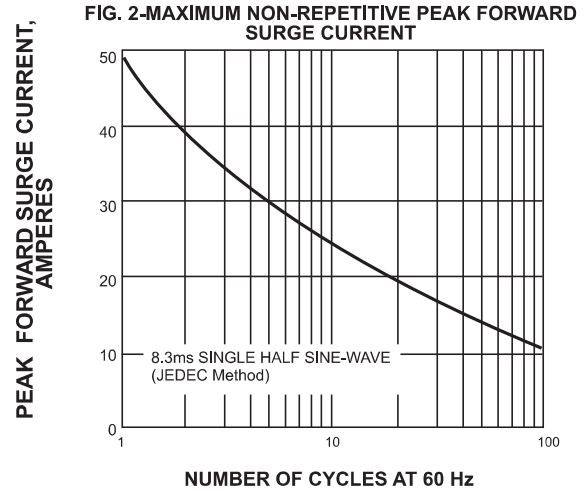
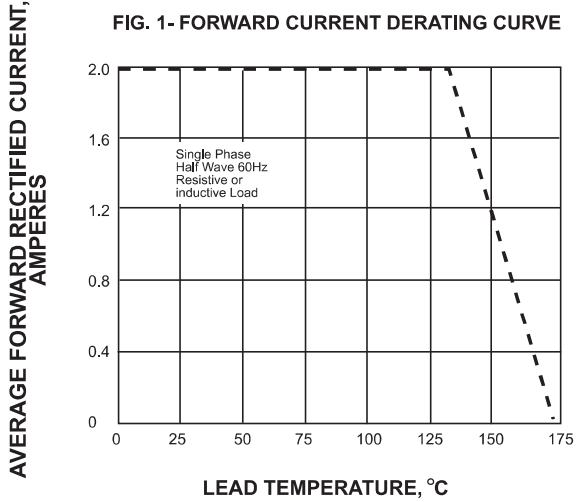
- ◆ **Case:** JEDEC PowerDI-123 molded plastic body
- ◆ **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any

### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)



PARAMETER	SYMBOLS	DFLS2100	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum RMS voltage	$V_{RMS}$	71	V
Maximum DC blocking voltage	$V_{DC}$	100	V
Maximum average forward rectified current at $T_L$ (see fig.1)	$I_{(AV)}$	2.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50	A
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.77	V
Maximum instantaneous forward voltage at 2.0A	$V_F$	0.85	V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	1	uA
		0.35	mA
Typical junction capacitance (NOTE 1)	$C_J$	220	pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	85	$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	-55 to +175	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +175	$^\circ\text{C}$

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
2. P.C.B. mounted with 2.0x2.0" (5.0x5.0cm) copper pad areas

### Rating and characteristic curves



## Pinning information

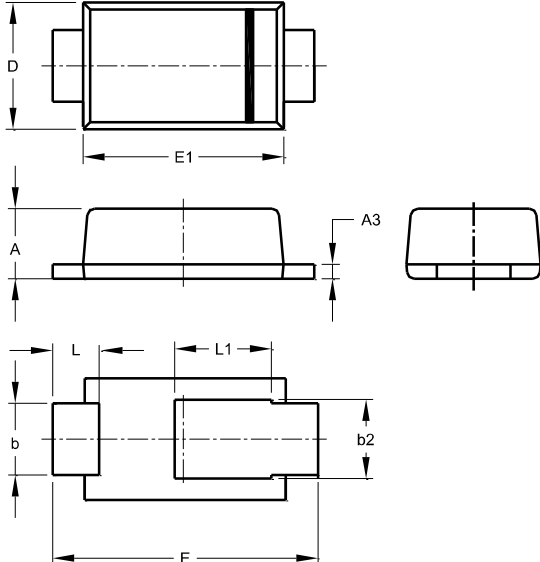
Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

## Marking

Type number	Marking code
DFLS2100	F09A

## Package outline

PowerDI-123

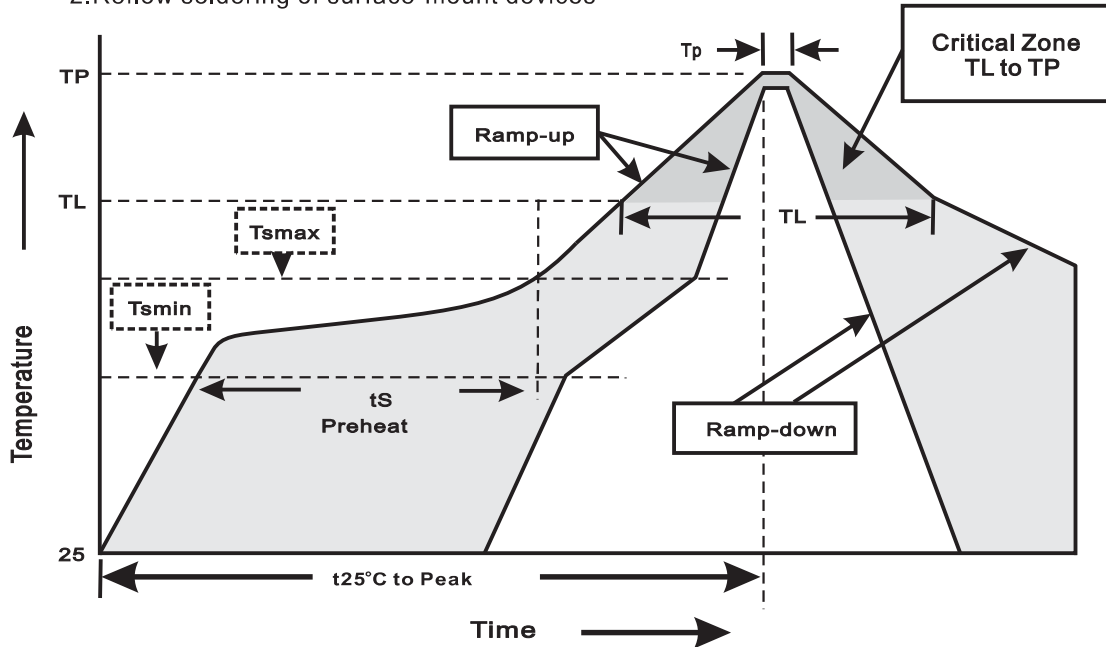


PowerDI-123		
Dim	Min	Max
A	0.85	1.05
A3	0.10	0.30
b	0.85	1.20
b2	1.05	1.35
D	1.65	1.95
E	3.50	3.90
E1	2.70	3.20
L	0.55	0.75
L1	1.40	1.60

**All Dimensions in mm**

**Suggested thermal profiles for soldering processes**

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes